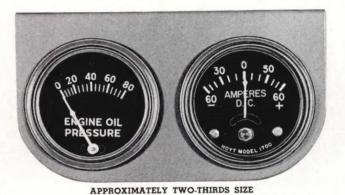
# floyt

# of Automotive

BATTERY TESTERS
TUNE-UP TESTERS
VOLTMETERS
AMMETERS

# NEW! HOYT NO. 1700 AMMETER AND OIL GAUGE COMBINATION

- GIVES COMPLETE INDICATION IMMEDIATELY OF IMPENDING TROUBLE
- MOUNTS UNDER DASH
- GRAY BRACKET HARMONIZES BEAUTIFULLY WITH INTERIORS



SPOT TROUBLE AT A GLANCE WITH THE HOYT NO. 1700 AMMETER AND OIL GAUGE

The No. 1700 Combination is a MUST if you want dependability of vehicle operation! This unit tells the COMPLETE story of engine operation, not just the "on and off" story that red warning lights do. Remember, red warning lights WON'T tell you the existence of—

overcharging of battery low charging rate which may not be sufficient to maintain battery charge

below normal operating oil pressure

burned out red warning lights or defective wiring

Install the No. 1700 and INSURE AGAINST THESE TROUBLES. It is an inexpensive unit which saves the owner many more dollars than just ONE BREAKDOWN on the road.

The ammeter supplied has a 60-0-60 range with U-clamp mounting. It has an expanded scale for easier reading of low charging currents.

The oil gauge unit, of the same size as the ammeter reads 0-80 pounds and is supplied with U-clamp mounting, also. Graduations on dial are marked at every 5 pounds for close readings.

Unit comes packed with instructions for installation, but less wire and tubing. Measures  $5\frac{1}{4}$ " x 3". Net weight 12 oz. Separate ammetergauge, oil gauge, or bracket available on special order.



No. 1701 Display of the combination ammeter and oil gauge holds 3 No. 1700 units. It is attractively printed in red, yellow and black for an excellent counter display. Sells the stock easily.

Size: 131/2" Wide x 10" High.

## **BURTON-ROGERS COMPANY**

Sole Representatives for HOYT ELECTRICAL INSTRUMENT WORKS 42 CARLETON STREET, CAMBRIDGE 42, MASS., U. S. A.

Printed in the United States

# HOYT NO. 655 BATTERY CONDITION TESTER

NO-LOAD TYPE

#### Features:

BEAUTIFUL

CHROME CASE

2 RUGGED METER
Long Colored Scale

3. PROD HANDLE

4 ADJUSTABLE PROD FOR CELLS OF ALL 6 or 12 VOLT BATTERIES,  $2\frac{1}{2}$ "  $-4\frac{1}{2}$ " SPAN.



Hoyt No. 655 and 656. Reads to 1/100th of a volt on a long red, yellow, green scale. Rugged Hoyt precision meter movement is housed in a beautiful chrome case equipped with convenient hanger on case back for battery stand or bench. Comes complete with  $4\frac{1}{2}$  ft. coiled cord (stretched), pin-point tips on prods for testing cell straps through battery compound, rubber cushion on prod handle to absorb pressure on hand, and adjustable prod,  $2\frac{1}{2}$ " to  $4\frac{1}{2}$ " span, to test ANY cell on ANY 6 or 12 volt battery. Easy to use expanded scale voltmeter, with color blocks to show battery cell condition at a glance.

#### TESTS BATTERIES 3 WAYS

- NO LOAD open circuit method in car or on bench.
- 2. LOAD METHOD in car using starter.
- CHARGING CONDITION by checking voltage regulator setting at battery.



NO. 515 CADMIUM TESTER

### CADMIUM TEST VOLTMETER NO. 515

WITH PRODS, BAKELITE CASE -- 4 x 5 INCHES

A precise long scale portable Voltmeter especially designed for Cadmium test work. The scale, which is over 3 inches long is calibrated in half-tenths of a volt for accurate Cadmium readings of real value to the battery man, in determining plate condition and setting the proper rate of charge. Special markings in red showing the limits of Voltage for positive and negative plates for each set of plates in both charged and discharged condition for acid-lead batteries, make readings quick and accurate. Supplied with a pair of test prods with leads, Cadmium Stick, and holder for attachment at right-angle to one prod.

# TYPE CI-210

# D. C. VOLTS 1.5 1.5 MODEL CT-21

#### EASY TO READ COLORED DIALS

TYPE CT-210 DIAL

The dials illustrated are actual size. The use of color with simple scale design takes the mystery out of battery testing for the car owner. It shows him the real condition of the battery on a dial he can read in plain English. This feature is of great value in selling new batteries or securing charging jobs.



# HOYT PROD TYPE CELL TESTER

Now Test all 6 and 12-Volt Batteries Easily, Quickly, Accurately.

Note below many features that Hoyt Cell Testers give you:

- 1. PRODS ARE ADJUSTABLE AND WILL FIT THE TERMINALS OF ANY BATTERY, 6 or 12 volts. One prod can be moved in a specially designed slotted holder to obtain proper spacing to test batteries with cells mounted lengthwise.
- 2. SPECIAL SWITCH on frame changes load for either 6 or 12 volt battery cells.
- SPECIAL LOAD METAL. Heat will not change its resistance. Load for 6 volt battery cell draws 150 amperes approx., and load for 12 volt battery cell draws 75 amperes approx. Both loads simulate three times the starter load on each battery cell.
- 4. SHARP POINTED PRODS ARE INSULATED so that they will not short against the metal edges of the hood or hand hole when testing battery in the car.
- THE LARGE METER is an accurate instrument, ruggedly made for long and hard use. Meter measures two and one-half inches in diameter.
- 6. FULL SIZED COLORED DIAL HAS LONG SCALE FOR EASY READING. Divisions are large and clear. Scale markings enable the car owner to read the battery condition for himself. Sells batteries!
- 7. EASY-GRIP HANDLE with hole permits tester to be hung up when not in use.

THESE FEATURES SHOW WHY HOYT CELL TESTERS ARE THE BEST BUY. Made by the oldest manufacturer of cell testers, they incorporate many unique features which have been developed over the years. Now, with 12 volt batteries in use in the automotive field, Hoyt has developed these testers for the garageman who will be servicing not only 6-volt batteries but 12 volt types as they become more widely used.

CT-210—This fine quality, extremely sensitive instrument has all the features described above, including the NEW "double-load" test. In addition, it makes an open circuit or "no load" test on a battery cell, as it is equipped with TWO "nut type" switches for selection of the test desired.

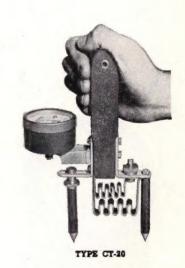
Furthermore the No. CT/210 has a moving-coil meter of precise accuracy. Its movement contains an Alnico magnet, and turns on jewelled bearings. The zero is suppressed in order to show VERY SMALL VOLTAGE DIFFERENCES, so important in determining cell condition at "open circuit." Proper polarity must be observed in applying the prods to a cell—they are clearly marked,—and the switches properly set for the kind of test and the kind of battery.

CT-20\_FIRST OF THE NEW "DOUBLE LOAD" CELL TESTERS for 6 and 12 volt battery cells is made especially for the small garage or service station user who wants a quality cell tester for a moderate price. A large 2½" vane type voltmeter with colored dial in red, green and yellow is provided. The centre zero meter does not have to have correct polarity for a cell reading and is noted for its dependability, ruggedness, and ease of handling.

CT-60—This inexpensive cell tester is popular with the trade for both 6-volt and 12-volt batteries. It is strongly constructed and has a 2" diameter moving vane voltmeter reading 2.2-0-2.2 volts. The resistance load is approximately 125 amperes. This is a rugged, serviceable instrument offered at a most attractive price. Furnished with colored dial in green, red, and black.



TYPE CT-20 DIAL



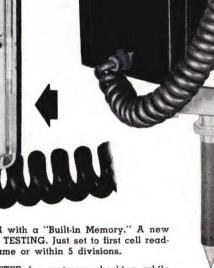
Hout QUALITY METERS FOR OVER FIFTY YEARS

# **HOYT NO. 700** PIGGY BACK BATTERY **TESTER**

A Complete Battery Tester!



Meter lifts off for customer checking



LOADED WITH MANY **FEATURES** 

THE ONLY "LOAD TYPE" TESTER with a "Built-in Memory." A new rugged adjustable pointer SPEEDS TESTING. Just set to first cell reading-all other cells should read same or within 5 divisions.

REMOVABLE "PIGGY BACK" METER for customer checking while battery is tested in car. EXPANDED SCALE reads to  $1/100 {\rm th}$  of a volt with LOAD or NO-LOAD on any 6 or 12 volt battery.

1/2 size. Meter at left is full size.

Illustration

approximately

OTHER FEATURES: ADJUSTABLE PRODS to fit cells of ANY 6 or 12 volt battery-COILED CORD for compactness-rubber-cushioned hand prod-2% d'Arsonval meter with 90-DAY GUARANTEE—unbreakable water repellent meter front—SUPER SHARP PRODS for instant readings.

#### HOYT REGULATOR TEST METERS

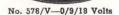
No. 578/V DC Voltmeter, 0/9/18 Volts No. 578/A DC Ammeter, 10/0/100 Amps.

The 578/V D.C. Voltmeter has a precision moving-coil movement with jewel bearings and knife-edge pointer for accurate readings to 1/10 of a volt as required today for setting regulators. It is housed in a small bakelite case with hanger, and supplied with a pair of test leads. Careful calibration of the important test points at 7 and 14 volts mean accurate adjustment of all regulators for both 6 and 12 volt batteries. Scale: 0/9 and 0/18 volts.

The companion ammeter, No. 578/A, for testing Current Regulators, has a high current capacity, 100 amps., for measuring heavy-duty or oversize generator output, including rectified current from alternator systems as well as current from all standard units on passenger cars and trucks. A small section of scale to the left of zero can be used for checking reverse current through cut-outs without changing the leads while testing. It is furnished in the same case as the voltmeter with hanger and a special pair of heavy current test-leads with heavy clips.



No. 578/A-10/0/100 Ampe.



Illustrations one-half size

A SIMULTANEOUS READING OF BOTH VOLTAGE AND CURRENT CAN BE MADE WHEN USING BOTH INSTRUMENTS AT THE SAME TIME: AN AV-UNIT AT LOW COST.

# HOYT GENERATOR AND REGULATOR TESTER

COLORED SCALE — 0/18 Volts 5/0/60 Amps.

No. GT-18

#### FOR 6 AND 12 VOLT SYSTEMS

Tests All Generators, Regulators, Batteries, Cables, Wiring, Primary Coil Currents, Relays

This moving-coil type, double-scale, VOLT-AMMETER was designed to give the automotive electrician an instrument of small size and reasonable price that would be dependably accurate and make all important tests.

The sturdy black bakelite case is small enough to slip into the coat pocket—and is equipped with a hanger for hooking over the car door or bumper, or any convenient projection on the test-bench.



Illustration

is approximately two-thirds size Three terminals are provided marked: +, A, and V; and a pair of test leads with clips are supplied. Connection of the leads to the + and V terminals gives the user a precise voltmeter with a scale 2" long, reading 0/18 volts. 100 scale divisions together with a knife edge pointer, makes readings to 1/10-volt easy and accurate.

Connection of the leads to the + and A terminals gives the user a precise ammeter with a scale of 5-0-60 amperes divided into 1 amp. divisions—a high enough range to measure the output of special generators, but with easy readings of low currents down to

 $\frac{1}{2}$  amp., by pressing button. The 5 amp, reverse reading is provided for checking opening of cutout relay. Compact, Just right for on-the-road jobs!



No. 665 MULTI PURPOSE TESTER

3 SCALES—.3/0/3/9/18 VOLTS
Tests 6 - 12 Volt Batteries, Voltage Regulators,

Generators, Lights, Voltage Drop, and Makes Cadmium Test on Battery

The Hoyt 665 Multi-Purpose Tester is a complete meter designed for all types of automotive work. For quick and easy reading, a long clear scale of 3 volts is calibrated to 1/10 of a volt. This scale is used for testing cables and wires for voltage drop, electrical leaks, and for testing batteries by open circuit method, or cadmium test. A few divisions to the left of zero is used in cadmium testing or for voltage drop testing.

The meter dial also features a combined 9 and 18 volt scale with colored blocks for checking voltage regulators on either 6 or 12 volt cars, trucks, or boats. A new prod with replaceable coiled cord is supplied.

A cadium stick and holder to fit the 606 prod, and instructions for making the cadmium test, can be supplied on special order as well as a pair of test leads for use with the meter when testing and adjusting regulators. Warranted for 90 days.

# GENERATOR CURRENT INDICATOR

NO. 663—Induction Type 75-0-75 Amps.

Newly Revised — Larger Meter — Very Handy to Use

Long Scale — Low Price.

This is a useful and inexpensive portable D.C. Ammeter for measuring approximate generator current up to 75 amps. WITHOUT "HOOKING-UP," or BREAKING INTO THE CHARGING CIRCUIT. Has wide divisions each side of zero for close readings.

The meter is held over the cable carrying the current where such cable is straight. The meter reads direct. Makes a quick check on generator charging rate. Especially useful on late model cars without dash Ammeters.



#### STARTER CURRENT INDICATORS

INDUCTION

No. 627—400-0-400 Amps.

No. 629-600-0-600 Amps.

No. 652-1000-0-1000 Amps.



A handy, inexpensive indicator for determining the approximate amount of current drawn by the starter of any automobile or truck. It is so easy to use because there are **NO CONNECTIONS TO MAKE, NO LEADS TO HOOK UP!** Simply place the wide V shaped slot, which is on the back of the meter, over the starter cable. (See worm's eye view on the right.) Press the starter switch and the meter will immediately show the approximate amount of current drawn by the starting motor. An attractive and easily read colored dial shows normal starter current draw.

Excellent for checking welder current also.

NOW, No. 627 has new longer, easy-reading scale.



Rear View of Current Indicator

#### TWO ATTRACTIVE DISPLAYS

No. 1300—To sell the Hoyt 627 Starter Current Indicator faster and easier, you will want to place this attractive 3 color display on your counter or shelf. Five meters come already mounted in the heavy card-board display which has an easel stand and printed in yellow, red, and black. Very compact in size—only 9" high by 12" wide. Get one! These meters sell themselves on sight with this display.

No. 1401—An attractive 3 color counter or shelf display for that most needed meter, the No. 663 Generator Current Indicator. For new cars without ammeters, the No. 663 sells on sight to mechanics. The heavy cardboard display with easel stand is 9" high by 12" wide and is printed in yellow, red, and black. Comes complete with five mounted meters and meter instructions.



# FAST VOLTAGE REGULATOR TESTER

#### HOYT No. 651-BB VOLTMETER for Both 6 and 12 Volt Systems

#### **FAST - ACCURATE - LONG SCALE**

Here is a tester that speeds up Voltage Regulator precision testing on the car. In addition, there are carefully calibrated scale blocks indicated to assist the user in promptly checking correct performance, or in locating trouble on all types of Voltage Regulators on all cars or light trucks—6 or 8 cylinders. Meter base in 4 x 5 inches, black bakelite with convenient hanger attached. Three insulated leads terminating in insulated clips are for connecting the voltmeter to battery (B), generator-armature, (A), and to any Convenient ground. A simply marked 2-position selector switch makes reading any one of these voltages a matter of seconds.

A switch at the left of the case marked "9" and "18" selects the proper scale for 6 or 12 volt systems.

No matter which battery terminal is grounded, a toggle-type reversing-switch always insures proper

reading. This saves time in changing leads.

After once "hooking-up" to the regulator unit, clipping the ground lead to engine block and selecting the proper scale, readings are as easy as 1, 2, 3. Another advantage is that once engine speed is set by adjusting the throttle arm, all readings and adjustments can be made quickly, without stopping the engine.

Expert Auto Electricians appreciate immediately the time-saving provided by this instrument. At the same time its operation is so simple, its readings so clearly indicated, that any one who charges batteries, or checks cars looking for an electrical unit giving trouble, can use it to advantage.



(Illustration is three-quarters size)

#### FIXED RESISTOR-HOYT NO. 633DR

The new Delco Series A regulator contains a voltage-control that is not affected by generator speed or current output, and requires a 1/4-ohm resistor in series with the battery lead for testing on late 1953 cars, either 6 or 12 volt systems.



(Illustration is one-half size)

#### FIXED RESISTOR-HOYT NO. 633

Three-fourths Ohm for 6-volt Batteries, plus a  $1\frac{1}{2}$  Ohm for 12-Volt Batteries with leads and clips

The unit is properly designed and ruggedly constructed for long hard service. It can be used with any of the Hoyt Voltmeters or Voltammeter combinations designed for setting regulators, when battery has been disconnected.

## ALL PURPOSE AMMETER

#### HOYT No. 626-BB

Is used with its companion tester, the 651-BB Voltage Regulator Tester, the two make a perfect combination for testing and adjusting all parts of the automotive electrical system.

The ammeter is mounted on a 4x5x2 inch bakelite base, the same as the volt meter, and has a convenient hanger for the car window or shop hook.

The scale is  $3\frac{1}{2}$  inches long and has 1 ampere divisions in the 10-0-60 ampere scale making it possible to read to within  $\frac{1}{2}$  ampere. The convenience of having a scale to the left of zero is for testing the regulator cutout opening point. Reversing the meter leads is not necessary to read this discharge current from the battery.

Colored blocks on scales 1 and 2 correspond to charging test 1 and discharge test 2 in the instructions.

The meter is equipped with a reversing switch so that changing leads when the ammeter is connected in a circuit is unnecessary. When the needle swings into the red zone, flipping the switch is all that is necessary.

Two insulated 30" leads with clips provide safe and quick connection to wires and terminals.

Hout QUALITY METERS FOR OVER FIFTY YEARS

# HOYT VOLT-AMP TESTER—No. 628

#### COMPLETE VOLTAGE COVERAGE

1/10th volt to 50 volts in 3 separate ranges: 0-10-20-50 volts

#### COMPLETE CURRENT COVERAGE

1 amp. to 80 amps. range: 7-0-80 amps.

USE AMMETER and VOLTMETER AT SAME TIME

LARGE EASY-TO-READ METER WITH LONG 4½ INCH SCALE UNBREAKABLE RAIN-PROOF FRONT

SEPARATE
AMMETER-VOLTMETER
LEADS CONNECTED
INSIDE METER CASE
PROVIDES FAST HOOKUP

#### MADE FOR LONG DEPENDABLE SERVICE

The Hoyt Volt-Amp. Tester shown complete ready to use is the ultimate in the Hoyt Testers. The unit is approximately  $7x3\frac{1}{2}x5\frac{1}{2}$  inches in size, made of durable bakelite.

New large Hoyt clear plastic case meter with a 4½-inch scale has a d'Arsonval movement—accurate to within 2%; large figures on the meter dial make it easy to read and use; unbreakable moisture-proof front.

The voltage scale gives complete coverage for testing all types of electric systems: 6, 12, 24, and 32 volts on automotive, truck or marine applications. The 10 volt scale reads to 1/10th of a volt; 20 volt scale to 1/10th of a volt; 50 volt scale to 1/10th of a volt. The ampere range of 80 amperes, reading to 1 ampere, will also give complete current coverage. A reverse reading of 7 amperes is provided for easy testing of regulator cutouts.

A selector switch is provided for selecting the voltage range desired. Switching for practically simultaneous readings between volts and amperes when testing voltage regulators is possible as there is always an amp. position next to a voltage range.

A Normal-Reverse switch is provided so when meter reads backwards the changing of leads is not necessary—just flip the switch—it saves time!



ILLUSTRATION IS ABOUT HALF SIZE

The separate ammeter and voltmeter leads are connected inside the meter case thus preventing loss and the trouble of connecting leads to meter. The polarity of leads is marked on sides of the meter dial. Leads come out of each side of case—are out of the way, and can be clipped to the handle when not in use. The heavy-duty handle on the unit makes it easy to carry or hang when either testing or storing.

Complete instructions on how to use the Volt-Amp. Tester are furnished with each unit.

The 628 Volt-Amp Tester makes these tests on 6, 12, 24, 32 Volt systems on Cars, Trucks, Busses, Boats:

Tests: Battery, voltage regulator, generator system; Starter action; Cables and wires; High current drain of parts and accessories; Electrical leaks and short circuits; Coil Primary current draw; Solenoids; Special Generator and Alternator Systems.

# HIGH TENSION TESTER - No. 634 BB

For Either 6v. or 12v. Systems

This test meter is designed for overall tests of the high-tension circuit. It shows coil output, tests Cables, and Flywheel Magnetos. It is not a milliammeter or low-reading voltmeter. It has a very high resistance; a condenser; and is specially insulated so that high voltage will not leak inside or outside the tester case. High voltage leads with insulated clips complete the unit.

The figures on the dial are simply marked to show a difference between a low and high output. The colored markings on the dial are carefully located after many tests to show condition of all types of coils and magnetos at both IDLE and HIGH SPEED.

ON SINGLE-CYLINDER ENGINES WITH FLY-WHEEL MAGNETOS, of which there are thousands in use powering boats, tractors, lawnmowers, etc., tests can be easily made also.

ON AUTOMOTIVE IGNITION SYSTEMS—the highest reading is not necessarily the best; most important is the highest AND STEADIEST reading. Improper setting of breaker-points or a poor condenser will cause a low and irregular action of the meter needle. A low or high Battery or a Voltage-Regulator not set properly, will cause a variation in HIGH TENSION reading. On these systems a DC voltmeter, such as the HOYT 651, should be used first, and Battery and Voltage-Regulator must be made to function properly before HIGH TENSION TEST is made.

This Meter works very fast and will quickly detect a SKIP or MISS, due to faulty High Tension current. The fault may be in the wires or in the Distributor where the distributor-shaft bushing may be worn. All readings must be the same to each plug for proper ignition. The same is true on Magnetos, used on four-cylinder truck engines.



No. 634-BB

# LOW ADJUST

No. 630 One-Third Size

### **HOYT CIRCUIT TESTER and OHMMETER - No. 630**

TESTS: Open circuits—Short circuits—High resistance—In any electrical circuit—Gas gauges and gas tank units—Traces uncoded conduit wires—Checks "high resistance" spark-plug wires.

The Hoyt 630 circuit tester is a handy compact attractive bakelite unit with plastic carrying strap approximately  $6x4x2\frac{1}{2}$ ".

The Hoyt meter of modern clear plastic type has a 400 microampere movement of the d'Arsonval type with a sensitivity of 1000 ohms per volt. The divisions on the 3 inch long scale are marked clearly making it easy to take fast readings on either high or low ohms.

The unit has a two scale switch which provides a LOW ohm scale of ¼ to 5000 ohms, and a HIGH ohm scale of 0-500,000 ohms.

A zero adjuster is provided so the meter can be adjusted to zero ohms and accurate tests can be made at all times.

The unit comes complete with 30" test leads with Alligator clips and a 1½ volt medium flashlight battery easily replaced by removing the meter panel from the case.

## New 12 Volt Performance Meter No. 664

For Permanent Mounting on Car or Truck
Hoyt No. 618B Round Lighted Meter with Bracket Available for 6-Volt Systems

An accurate and precise moving coil Voltmeter, of neat appearance, for permanent installation on any motor vehicle for a dependable and continuous check on the vehicle's storage battery, generator, and regulator.

It is made especially for the drivers who cannot afford EVEN ONE battery, generator, or regulator, failure: Police cars, fire-apparatus, doctors, salesmen, etc.

The meter is equipped with a direct reading scale—in color—for testing the battery under load (using starter) and a second colored scale for continuously checking the generator and the regulator action as the car is driven. This makes possible immediate detection of improper electrical action, and indicates possible failure before it happens.

Furthermore a specially designed bracket allows the meter to be installed at the lower edge of the instrument panel of practically ANY car or light truck, so it may be directly before the driver's eyes.

A 30-inch insulated double-conductor lead terminating in spade terminals, marked for polarity, is attached to the meter, for ease in making connection.

For reading at night, an illuminating device consisting of a small bulb is designed to fit the rear of the meter case, to illuminate the translucent dial.



No. 664

# NO. 17-3 AA ALTERNATOR AMMETER AND SHUNT WITH LEADS

A Precise Moving-Coil Meter for Instrument Panel Mounting on Vehicles Using Alternator Generating System. Illustration is One-half Size.

The Hoyt Dash-mounting Alternator Ammeter has been calibrated to give a true reading of amperes, delivered by an Alternator, through a Rectifier and voltage regulator to a battery installed on a car. It has been calibrated to make allowance for the size and length of the shunt leads complete with the battery in the circuit, and meter mounted on a steel panel.

The insulated shunt is mounted in any convenient place on the engine side of the bulk-head. The 48" shunt leads carry only a fraction of the total charging current; therefore, small wires can be used, and can be easily run up to the meter mounting position on the dash.

The bakelite case ammeter has an overall flange diameter of about 2%" and mounts in a 21/4" hole. Use the Hoyt LE4B Bracket for lower edge of panel mounting.

For No. 85 80/0/80 Alternator Ammeter with internal shunt, see Page 11.

The reading of the Ammeter will be much the same as the ordinary car ammeter which it replaces, except the capacity is much higher, and the indication more accurate. A model with inside illumination and translucent dial for night-driving is also available.



For 6 or 12-Volt Systems

For No. 85 80/0/80 Alternator Ammeter with internal snunt, see Page 11.



NO. 614/BB A.C.-D.C. TEST METER WITH 5-FT. LEADS AND CLIPS—HALF SIZE

# ALTERNATOR TEST METERS

The Hoyt No. 614 Alternator Test Meter is a specially designed instrument to read both A.C. and D.C. Voltage up to 20 volts. Two terminals are provided and either of them may be used for measuring A.C. Voltage. One terminal, however, is marked with a "plus" and the plus lead should be connected to this terminal when measuring D.C. Voltage.

The movement is of the repulsion type; sensitive but pneumatically damped, so that the meter pointer will quickly come to rest without any flicker or stiff action.

The movement is housed in a small bakelite case which fits the coat pocket. Attached to this case is a strong metal bale constructed to suspend the meter in any convenient place. A pair of rubber covered leads 5 feet long with clips is also supplied.

The scale is carefully designed to allow quick reading at the important points in testing the A.C. Alternator.

## HOYT AMMETER NO. 1501 AND AMMETER DISPLAY NO. 1601

For Late Model Cars Equipped with "No Charge" Lights Only

Drivers of late model cars equipped with "No Charge" lights can tell only when the generator is charging or is not charging. They have no way of knowing how much or how little. If the charging system develops a short the driver would never know it! Now, install a HOYT ammeter No. 1501 and save worry!

The meter is handsome and dependable, 60-0-60 amps. scale with wider divisions up to 30 amps. for easier readings.

It fits either 6 or 12 volt systems—Hoyt quality throughout, can be mounted easily on the lower edge of the instrument panel in most cases. Furnished in attractive polished nickel case, mounted in black enamel bracket. Sold individually or in display No. 1601 with 5 ammeters.



# **HOYT AMMETERS** — Centre Zero Scales

FOR TRACTORS, BOATS, LIGHTING PLANTS, AUTOMOBILES STATIONARY ENGINE PANELS, TRUCKS and BUSSES



The ammeters, sometimes known as the "Automobile Type" are rugged direct current indicators for low voltage duty, which Hoyt has built for over thirty years. The line covers the field of Current measurement from 10 amperes up to 150 amps. They are especially suitable for small inexpensive panels of all types, for off-the-road vehicles like Tractors, Welders and Air Compressors.



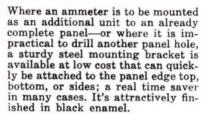
Back of Meter Showing U-Clamp



Those up to and including 100 amperes are stud connected—150 amperes are of the induction type, where the current carrying cable is simply laid in a groove at the back of the meter and held tightly by "fingers" attached to the meter case.



All are supplied in the popular Narrow Rim Flush polished Nickel Case, which fits a 2" or 2½" diam. hole, and all are equipped with rear U-clamps for quick and easy mounting.





Panel Mounting Bracket No. LE-3









Mounting Bracket No. SP-1 for Round Steering Posts

For ammeter installation on vehicles it is often easier to attach the meter to a round vertical column or steering post. A special metal bracket for this type of mounting is also available at low cost.



In some cases a wide rim or flange is desired on an ammeter. Instead of furnishing such a wide rim case with 3-hole mounting, Hoyt offers a black finished metal ring to be used over the standard narrow rim case.

Numbers 40 and 63 are two ammeters in 20 and 30 amperes respectively, packed with the ring. Rings can be supplied with any ammeter, at small additional cost.

Two small low price ammeters, 30-0-30 amperes, of universal application are shown. No. 4430A is packed with a round adapter with three mounting holes in a wide rim which fits any panel hole from 1%" to 21/4" diameter.

No. 7202 is a similar small inexpensive ammeter 30-0-30, with a metal bracket into which it "press-fits." The bracket may be easily bent to any angle and readily attached to the edge of any small panel.



#### **AUTOMOTIVE REPLACEMENT AMMETERS**

Chevrolets Chevrolet, '33 (Master) 66 Chevrolet Truck, '33-'34-'35 66 Chevrolet, '34-'35-'36 (Master) 69 Chevrolet Truck, '36-'37-'38 69

Fords CAR AMMETER Ford, '28, '29, '30, '31, Model A 44 Ford, V-8, '33, '34 44/R Ford, V-8, '36, '37 and 38 81B

# HERE IS A WAY TO SELL MORE HOYT AMMETERS

Exhibit on your counter one of these handsome Four-color Displays with seven ammeters used on trucks and passenger cars using heavy duty generators and alternators. They also fit tractors, off-the-road vehicles, boats, compressors and stationary engine panels.

All popular types.

#### HOYT AMMETER DISPLAY-No. 1200

Seven Meters Mounted in the Display as follows:

- 1-#41 20/0/20 NARROW RIM
- 1-#42 30/0/30 NARROW RIM
- 1-#7202 30/0/30 (TRACTOR)
- 1-#85 80/0/80 (ALTERNATOR) in LE-3 BRACKET
- 1-#77 60/0/60 NARROW RIM (Heavy duty generators)
- 1-#63 30/0/30 WITH RING (WIDE RIM)
- 1-#4430A 30/0/30 (UNIVERSAL)

THE COST IS LOW



HOYT AMMETER DISPLAY NO. 1200 151/2" High X 14" Wide

### AMMETERS FOR BATTERY CHARGERS



Thousands of battery-chargers have been supplied the trade with Hoyt ammeters as original equipment. When a replacement ammeter is required for any type charger the one shown below will do the work, as it is designed and calibrated especially for this duty.

No. 640-S15 Charger Ammeter 0/15—Surface Case No. 640-S8 Charger Ammeter 0/8—Surface Case No. 640-F8 Charger Ammeter 0/8—Flush Case



#### B-R RECTIFIER BULB for REPLACEMENT in BULB TYPE BATTERY CHARGERS

The outstanding performance of these rectifier tubes is widely recognized. These tubes are carefully assembled, then thoroughly pumped on clean, all-glass exhaust systems by the best methods known. Every rectifier tube is then twice-tested and inspected for every conceivable defect. Dependable operation and exceptionally long life result. We invite comparison with the best offered by other manufacturers. Warranty: 1500 hours on 6 ampere bulb; 1200 hours on 15 ampere bulb.

#### Competitive Model Numbers

Model No.	Old No.	Am- peres	Volts	Continental	G.E.	Gordos	JAN	Revall	Sheldon	Westinghouse
BR-49 BR-83	6G 15G	6 15	90 60	CE-226 CE-235	189049 217283	G-49 G-83	4B26 5B21	R-49 R-12	6-G 15-G	289416 766776

Packed in standard packages of 12—Weight: 12 lbs.

# PRICES EFFECTIVE OCT. 1, 1959 Subject to Change Without Notice



I			
S	BATTERY TEST METERS	DEALER OR GARAGE	
	No. CT/60 Cellchek—load type for 6 v. and 12 v. Batts.	. \$4.65	
Ш	No. CT/20 Cell Tester—load type—for both 6 and 12 v. batteries		
()	Meter only for CT/2 Tester or CT/20 Tester  Meter only for CT/6 Tester or CT/60 Tester  Meter only for CT/1 Tester or CT/10 Tester  Meter only for CT/10 Tester or CT/10 Tester	15.95	
=	Meter only for CT/6 Tester or CT/60 Tester	· 2.30 · 12.25	
IL _	Meter only for CT/21 Tester or CT/210 Tester.  No. 515 Cadmium Voltmeter with pair of Prods, Cad. Stick and holder	29.25	
UH	No. 665 Multi-purpose Tester—0/3/9/18 volts with Prod (Improved No. 606)	19.95	
S' F	Extra Prod and lead for No. 606 or 665  Extra pair of Test Leads for No. 606 or 665  Extra Cadmium Stick and Holder for No. 606 or 665  Extra Cadmium Stick and Holder for No. 606 or 665	1.80 2.50	
(I)	Extra Cadmium Stick and Holder for No. 606 or 665  Extra Cadmium Stick only	5.75	
R	No. 655 Battery Condition Tester with Adjustable Prod	. 19.95	
AR	No. 700 "Piggy Back" Battery Tester TUNE UP METERS	19.95	
	No. GT-18 Generator Tester-5/0/60 amps. and 0/18 volts (Improved No. GT-20)	. 19.95	
d H	No. 578-A DC Regulator Test Ammeter, 10/0/100 with Heavy Test Leads	. 16.00	
DEA	No. 578-V DC Regulator Test Voltmeter, 0/9/18 v. with Leads No. 626—Type BB All-Purpose Ammeter	. 16.00	
C E	No. 627 Starter Current Indicator, 400/0/400 amps.	. 3.95	
LX	No. 628 Volt-Amp. Tester	. 41.75	
111	No. 629 Starter Current Indicator, 600/0/600 amps.  No. 630 Circuit Tester and Ohmmeter	. 4.45	
=	No. 633 Fixed Resistor—6 and 12 v. systems, 34 and 1½ ohms	. 6.50	
<	No.633 DR Fixed Resistor—¼-ohm	90	
-	No. 634 BB High Tension Tester No. 651—Type BB Fast Voltage Regulator Tester for both 6 and 12 volt systems	. 16.50	
0	No. 652 Starter Current Indicator, 1000/0/1000 amps.  No. 663 Generator Current Indicator, 75/0/75 amps. (replaces No. SC-3)	. 5.00	
7		. 3.95	
2	SPECIAL TEST METERS for Alternator Systems	- 1.000 - 11	
AUTOMOTIVE DEALERS' PRICE (EXCEPT FAR WEST)	No. 614-BB Alternator Test Meter, 0/20 volts DC and AC	. 23.95	
-	MISCELLANEOUS  No. 640-S8 Rectifier Replacement Ammeter, 0/8 amps., 2-inch size, Surface Case	100	
	No. 640-F8 Rectifier Replacement Ammeter, 0/8 amps., 2-inch size, Surface Case		
4	No. 640-S15 Rectifier Replacement Ammeter, 0/15 amps., 2-inch size, Surface Case	. 2.10	
	No. 632 Type BB Bat, and Reg. Checker—6 v. or 12 v. types		
	BR-49 Bulbs for Replacement in Battery Chargers—6 amps.  No. 1300 Starter Cur. Ind. Display—5 No. 627 Indicators		
>	No. 1401 Generator Cur. Ind. Display—5 No. 663 Indicators	. 19.75	
COMPANY RICAL INS. WORKS	AMMETERS-Centre Zero Type-For Boats, Small Panels, Off-the-Road Vehicles	DEALER	LIST
PAR	Nos. 40, 41, 20/0/20 Ammeters, and No. 63, 30/0/30 Ammeter		\$4.25
W. WA	No. 42, 30/0/30 Ammeter	. 2.35	3.75
Z 2 0	No. 44 30/0/30 amps. No. 44 50/0/50 amps.	85	1.45 2.45
S COM	Adapter Plates for No. 44	25	.40
OFFI	No. 77 60/0/60 Ammeter	. 2.55	4.25
RICIA	No. 85 80/0/80 Ammeter No. 86 100/0/100 Ammeter		7.35 7.60
O HR	No. 87 150/0/150 Ammeter—induction type		10.50
ER	No. 87 150/0/150 Ammeter—induction type  Mounting Bracket for above Ammeters—No. LE-3 or SP-1	58	.95
	No 1900 Ammotor Diaplox	17.75	29.30 2.00
DO G	No. 4430A Universal Ammeter, 30/0/30—Fits any hole 1%" to 2¼" diam.  No. 4450B Universal Ammeter, 50/0/50—Fits any hole 1%" to 2¼" diam.	1.65	2.75
Ongo	No. 7202 30/0/30 Ammeter and Universal Bracket—LE-2	1.50	2.50
OF EX	No. 7203 50/0/50 Ammeter with LE-2 Bracket	1.80	3.00
URTON-RO SOLE REPRESENTATIVES 42 CARLETON S'	AMMETERS FOR ALTERNATING INSTALLATIONS (Prices include Excise Tax)	01.00	
ON BEE	No. 17/3 AA Alternator Ammeter 100/0/100 amps. with shunt (Bakelite Case) No. 17/3 A-Ill. Lighted Dial Alt. Am. 100-0-100 amps.	· 21.00 · 25.00	30.00 40.00
TCAR	No. 85 Alternator Ammeter, 80/0/80 amps., Nar. rim with U-Clamp	. 4.75	8.00
F 20	Brackets for Mounting Alternator Ammeter— No. SP-1 For Round Steering Posts	58	.95
E 24	No. LE-3 For Lower Edge of Panel for metal case No. 85 Ammeter	58	.95
٣.	No. LE-4B Special Lower Edge Panel Bracket for Bakelite Case 17/3 AA	72	1.20
m	METERS for Vehicle Mounting (Prices include Excise Tax)  No. 618B Performance Meter, 6 volt system, voltmeter with light	12.50	21.00
	No. 664 Performance Meter, 12 volt type, voltmeter with light	14.00	23.00
	No. 1501 Ammeter Kit only No. 1601 Display of 5 No. 1501 Ammeter Kits	. 2.95	4.95
	No. 1601 Display of 5 No. 1501 Ammeter Kits  No. 1700 Ammeter and Oil Gauge Combination with bracket	. 14.75 . 6.05	24.75 9.95
	No. 1701 Display of 3 No. 1700 Ammeter and Oil Gauges		29.85
	AUTOMOBILE REPLACEMENT AMMETERS (Prices include Excise Tax) AMMETERS FOR FORDS		
	No. 44 (Model T. '26, '27: A. '28 to '31) 20/0/20 amps	85	1.45 3.00
	No. 44/R (V-8, '33, '34) No. 81/B (V-8, '36, '37 and '38)	1.35	2.25
	AMMETERS FOR CHEVROLET—No. 66, 69		1.95

FORM NO. A-18